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EXAMINER	
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2462	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/583,788	TAPIA MORENO ET AL.	
	Examiner	Art Unit	
	KHOA HUYNH	2462	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 August 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11,13 and 15-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11,13 and 15-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to the Applicants' amendment received on 08/11/2009.

Claim Status

2. Claims 1-3, 5, 7, 9, 11, 13, 15, 17-18, 21-26, 28 are amended.

3. Claims 12, 14 are cancelled.

4. Claims 1-11, 13, 15-28 are currently presenting for examination, with claims 1, 13, and 15 being independent.

Objections Status

5. Amendment to claim 9 had been received. Therefore, objection to claim 9 is withdrawn.

6. This action has been made **FINAL**.

Response to Arguments

7. Applicants' arguments filed 08/11/2009 have been fully considered but are not persuasive, are moot in view of the new ground(s) of rejection.

8. The followings are Examiner response to applicants' arguments.

9. First of all, Examiner would like to express gratitude to Applicants' representative for the time he spent on writing such detailed response which superbly clarified a lot of vague aspects of the claimed invention.

10. Examiner would further appreciate it if in the next response, a few more answers could be provided to resolve the following uncertainties.

11. On page 8 of the response, the term "computer readable storage medium" is not defined in paragraph 21 as stated by Applicants' representative. In fact, the term "computer readable storage medium" is not being defined anywhere in the specification itself.

12. On pages 8-9 of the response, it seems Applicants' representative might have a different interpretation of the term "time slot" from the interpretation of one of ordinary skills in the art. A "time slot" is an interval of time. And as admitted by applicants' representative, Koo teaches controlling power using transmission time interval and transmission power is adjusted once per TTI (Koo, paragraphs 33, 54-55). Applicants' representative cited paragraphs 42, 43, 60 of the specification to state the differences between the instant application and Koo, however, applicants' representative is reminded that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

13. On pages 9 of the response, regarding newly amended claim limitation "wherein said individual service quality levels are bit error ratios of each individual time slot". Applicants' representative's argument is moot due to the new ground of rejection.

14. The referenced citations made in the rejection(s) are intended to exemplify areas in the prior art document(s) in which the Examiner believed are the most relevant to the claimed subject matter. However, it is incumbent upon the applicant to analyze the prior art document(s) in its/their entirety since other areas of the document(s) may be relied upon at a later time to substantiate examiner's rationale of record.

15. Therefore, in the next response, Examiner would appreciate it if Applicants' representative could clearly point out any other patentable novelty, beside what is already indicated as allowable subject matter by Examiner, that he or she thinks the claimed invention presents in view of the state of the art disclose by the references as a whole.

Claim Rejections - 35 USC § 101

16. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

17. **Claim 13** is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

18. **Claim 13** recites "computer readable storage medium". There is no definition for "computer readable storage medium" in the specification. Therefore, "computer readable storage medium" can be interpreted as carrier wave. Claims that are broad enough to include nonstatutory subject matter (signals) as well as statutory subject matter (tangible manufactures) are considered to be unpatentable.

Claim Rejections - 35 USC § 102

19. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

20. **Claims 1-2, 6-8, 10-11, 27** are rejected under 35 U.S.C. 102(e) as being anticipated by Koo, US 2004/0121794.

21. **For claim 1**. Koo teaches: Method comprising: at a transmission power controller (Koo, page 2, paragraph 20, transmission power controller), obtaining a common target signal quality level (Koo, page 2, paragraph 21, common target SIR is obtained);

at said transmission power controller (Koo, page 2, paragraph 20, transmission power controller), obtaining individual service quality levels each relating to one of several individual time slots (Koo, fig 2, CRC check is performed in each block/time slots to obtain individual service quality for each); wherein said individual time slots are assigned to one composite transport channel (Koo, fig 2, individual time slots assigned to one TrCH) for a data stream resulting from combining of one or several transport channels (Koo, page 1, paragraph 5, CCTrCH is the result of combining several TrCH)

at said transmission power controller (Koo, page 2, paragraph 20, transmission power controller), determining individual target signal quality offset levels each relating to one of said individual time slots on the basis of said individual service quality levels (Koo, page 2, paragraphs 26-27, SIR_step_size which is the offset level is determined per block/slot);

and at said transmission power controller (Koo, page 2, paragraph 20, transmission power controller), determining individual target signal quality levels each relating to one of said individual time slots on the basis of said common target signal quality levels (Koo, page 1, paragraph 5, WTRU measures individual SIR for all time slots and compare it to a common target SIR) and said individual target signal quality offset levels levels (Koo, page 2, paragraphs 26-27, SIR_step_size which is the offset level is determined per block/slot) such that controlling transmission power for each individual time slot is obtainable, wherein said transmission power is adapted to specific interference conditions of each one of said individual time slots (Koo, page 3, paragraph 31, transmission power is control using SIR_step_up and SIR_step_down, which take into account interference conditions of each time slots/block)

wherein said transmission power controller (Koo, page 2, paragraph 20, transmission power controller) is arranged in a radio access network or a cellular terminal of a time division duplex cellular system supporting multislot services (Koo, page 1, paragraph 5, TDD system with multiple time slots).

22. **For claim 2**. Koo discloses all the limitations of claim 1, and Koo further teaches: at said transmission power controller, determining said individual target signal quality offset levels by mapping said individual service quality levels from a service quantity scale to a signal quantity scale (Koo, page 2, paragraph 26, offset level SIR_step_size, which is a signal quantity scale is calculated from BLER which is a service quantity scale) .

23. **For claim 6**. Koo discloses all the limitations of claim 1, and Koo further teaches: wherein said common target signal quality level is adjusted in accordance with a common target service quality level and a common measured service quality level being determined from said data transmitted on said composite transport channel (Koo, page 4, paragraph 47, target SIR is adjusted according to target BLER and measured N_e, which is the number of CRC errors per TTI for the reference TrCH) .

24. **For claim 7**. Koo discloses all the limitations of claim 1, and Koo further teaches: wherein said common target signal quality level is obtainable from an outer loop power control mechanism (Koo, page 2, paragraph 21, outer loop power control process obtains target SIR).

25. **For claim 8**. Koo discloses all the limitations of claim 1, and Koo further teaches: wherein said common target signal quality level is a common target signal to interference ratio (Koo, page 2, paragraph 20, target signal quality level is SIR)

26. **For claim 10**. Koo discloses all the limitations of claim 1, and Koo further teaches: wherein said composite transport channel is a coded composite transport channel (Koo, page 1, paragraph 5, composite transport channel is CCTrCH/coded composite transport channel).

27. **For claim 11**. Koo discloses all the limitations of claim 1, and Koo further teaches: wherein said time division duplex cellular system is a wideband code division multiple access--time division duplex (WCDMA-TDD) system and particularly a time division synchronous code division multiple access (TD-SCDMA) system (Koo, page 2, paragraph 18, W-CDMA utilizing TDD mode, also applicable to TD SCDMA).

28. **For claim 27**. Koo discloses all the limitations of claim 6, and Koo further teaches: wherein said common target signal quality level is obtainable from an outer loop power control mechanism (Koo, page 2, paragraph 21, outer loop power control process obtains target SIR).

Claim Rejections - 35 USC § 103

29. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

30. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

31. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

32. **Claims 3, 9, 26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Koo, 2004/0121794 in view of Muller, US 6,490,461.

33. **For claim 3**. Koo discloses all the limitations of claim 1, however Koo doesn't teach: at said transmission power controller, mapping a difference between said individual service quality levels and a combined individual service quality level for determining said individual target signal quality offset levels.

Muller from the same or similar fields of endeavor teaches: at said transmission power controller (Muller, fig 2, control unit 33), mapping a difference between said individual service quality levels and a combined individual service quality level for determining said individual target signal quality offset levels (Muller, column 5, lines 5-25, individual BER are measured and compared with estimated total BER to determine an offset, which is used to modify the target E_b/I_o)

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Muller into Koo, since Koo suggests a technique for using signal quality offset to control transmission power, and Muller suggests the beneficial way of calculating such offset by comparing measured individual BER and estimated total BER to provide more accurate power control (Muller, column 4, lines 1-8) in the analogous art of power controlling.

34. **For claim 9**. Koo discloses all the limitations of claim 1, and Koo further teaches: wherein said method allows for issuing transmission power control commands for each time slot (Koo, page 1, paragraph 5, power control command is issued for all time slots), wherein said transmission power control commands applicable to control transmission power for data communications in downlink direction (Koo, page 3, paragraph 36, power control in downlink direction)

Koo doesn't teach: in uplink direction.

Muller from the same or similar fields of endeavor teaches: in uplink direction (Muller, column 4, lines 8-13, uplink direction)

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Muller into Koo, since Koo suggests a technique for power controlling in downlink direction, and Muller suggests the beneficial use of implementing similar technique in both downlink and uplink direction to provide more accurate power control (Muller, column 4, lines 1-13) in the analogous art of power controlling.

35. **For claim 26**. Koo discloses all the limitations of claim 2, however Koo doesn't teach: at said transmission power controller, mapping a difference between said individual service quality levels and a combined individual service quality level for determining said individual target signal quality offset levels.

Muller from the same or similar fields of endeavor teaches: at said transmission power controller (Muller, fig 2, control unit 33), mapping a difference between said individual service quality levels and a combined individual service quality level for determining said individual target signal quality offset levels (Muller, column 5, lines 5-25, individual BER are measured and compared with estimated total BER to determine an offset, which is used to modify the target E_b/I_o)

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Muller into Koo, since Koo suggests a technique for using signal quality offset to control transmission power, and Muller suggests the beneficial way of calculating such offset by comparing measured individual

BER and estimated total BER to provide more accurate power control (Muller, column 4, lines 1-8) in the analogous art of power controlling.

36. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over Koo, 2004/0121794 in view of Muller, US 6,490,461 as applied to claim 3 above, and further in view of Pietraski, US 2004/0146023.

37. **For claim 4**. Koo and Muller disclose all the limitations of claim 3, however Koo and Muller don't teach: wherein said combined individual service quality level is a function of said individual service quality levels.

Pietraski from the same or similar fields of endeavor teaches: wherein said combined individual service quality level is a function of said individual service quality levels (Pietraski, page 4, paragraph 64, estimated combined BER is a function of individual BER)

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Pietraski into Koo and Muller, since Muller suggests a technique for comparing measured individual BER and estimated total BER, and Pietraski suggests the beneficial way of calculating such total BER from individual BER to provide an enhanced estimation procedures which will conserve transmit power and reduce interference (Pietraski, page 1, paragraph 12) in the analogous art of quality estimating.

38. **Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over Koo, 2004/0121794 in view of Futakata, US 2003/0072274.

39. **For claim 5**. Koo discloses all the limitations of claim 1, however Koo fails to teach: wherein said individual service quality levels are bit error ratios of each individual time slot

Futakata from the same or similar fields of endeavor teaches: wherein said individual service quality levels are bit error ratios of each individual time slot (Futaka, page 2, paragraph 38, data quality values include bit error rate of each time slot)

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Futakata into Koo, since Koo suggests a technique for power controlling based on service quality values, and Futakata suggests the beneficial use of including bit error ratios of each invidual time slot in such quality values to allow appropriate setting of transmission power of each time slot individually (Koo, page 1, paragraph 14) in the analogous art of power controlling.

40. **Claims 13, 15-16, 18-25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Koo, 2004/0121794 in view of Andersson, US 2005/0085255.

41. **For claim 13**. Koo teaches: the method comprising: obtaining a common target signal quality level (Koo, page 2, paragraph 21, common target SIR is obtained);

obtaining individual service quality levels each relating to one of several individual time slots (Koo, fig 2, CRC check is performed in each block/time slots to obtain individual service quality for each), wherein said individual time slots are assigned to one composite transport channel (Koo, fig 2, individual time slots assigned to one TrCH) for a data stream resulting from combining of one or several transport channels (Koo, page 1, paragraph 5, CCTrCH is the result of combining several TrCH);

determining individual target signal quality offset levels each relating to one of said individual time slots on the basis of said individual service quality levels (Koo, page 2, paragraphs 26-27, SIR_step_size which is the offset level is determined per block/slot);

and determining individual target signal quality levels each relating to one of said individual time slots on the basis of said common target signal quality levels (Koo, page 1, paragraph 5, WTRU measures individual SIR for all time slots and compare it to a common target SIR) and said individual target signal quality offset levels (Koo, page 2, paragraphs 26-27, SIR_step_size which is the offset level is determined per block/slot) such that transmission power controlling is obtainable, which is adapted to specific interference conditions of each one of said individual time slots (Koo, page 3, paragraph 31, transmission power is control using SIR_step_up and SIR_step_down, which take into account interference conditions of each time slots/block).

Koo doesn't teach: Computer readable storage medium comprising program code sections stored thereon, which when run on a computer, a terminal, a network

device, a mobile terminal, or a mobile communication enabled terminal perform the above method.

Andersson from the same or similar fields of endeavor teaches: Computer readable storage medium comprising program code sections stored thereon, which when run on a computer, a terminal, a network device, a mobile terminal, or a mobile communication enabled terminal perform the above method (Andersson, page 4, paragraphs 47-48, computer readable medium store program, run on computer based system)

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Andersson into Koo, since Koo suggests a technique for improving transmission power controlling, and Andersson suggests the beneficial implementation of such technique using computer readable medium to store program which runs on computer based system (Andersson, page 4, paragraph 46) to ease the process of implementation and improve compatibility in the analogous art of power controlling.

42. **For claim 15**. Koo teaches: Transmission power controller (Koo, page 2, paragraphs 19-20, WTRU unit contains inner loop power control and outer loop power control, page 1, paragraph 11, control transmit power by monitoring SIRs) comprising at least

... obtaining a common target signal quality level (Koo, page 2, paragraph 21, common target SIR is obtained);

... obtaining individual service quality levels each relating to one of several individual time slots (Koo, fig 2, CRC check is performed in each block/time slots to obtain individual service quality for each); wherein said individual time slots are assigned to one composite transport channel (Koo, fig 2, individual time slots assigned to one TrCH) for a data stream resulting from combining of one or several transport channels (Koo, page 1, paragraph 5, CCTrCH is the result of combining several TrCH)

... determining individual target signal quality offset levels each relating to one of said individual time slots on the basis of said individual service quality levels (Koo, page 2, paragraphs 26-27, SIR_step_size which is the offset level is determined per block/slot);

... determining individual target signal quality levels each relating to one of said individual time slots on the basis of said common target signal quality level (Koo, page 1, paragraph 5, WTRU measures individual SIR for all time slots and compare it to a common target SIR) and said individual target signal quality offset levels (Koo, page 2, paragraphs 26-27, SIR_step_size which is the offset level is determined per block/slot) such that said transmission power controller is enabled to specifically adapt transmission power for each individual time slot to individual interference conditions of each one of said individual time slots (Koo, page 3, paragraph 31, transmission power is control using SIR_step_up and SIR_step_down, which take into account interference conditions of each time slots/block).

wherein said transmission power controller (Koo, page 2, paragraph 20, transmission power controller) is arranged in a radio access network or a cellular

terminal of a time division duplex cellular system supporting multislot services (Koo, page 1, paragraph 5, TDD system with multiple time slots).

Koo doesn't teach: means for performing the previous steps

Andersson from the same or similar fields of endeavor teaches: means for performing the previous steps (Andersson, fig 5, quality measurement/control logic 410, SIR processing 420)

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Andersson into Koo, since Koo suggests steps for improving transmission power controlling, and Andersson suggests the beneficial implementation of such steps using quality measurement/control logic and processing unit (Andersson, page 4, paragraph 46) to ease the process of implementation and improve compatibility in the analogous art of power controlling.

43. **For claim 16**. Koo and Andersson disclose all the limitations of claim 15, and Koo further teaches: mapping said individual service quality levels from a service quantity scale to a signal quantity scale (Koo, page 2, paragraph 26, offset level SIR_step_size, which is a signal quantity scale is calculated from BLER which is a service quantity scale).

44. **For claim 18**. Koo and Andersson disclose all the limitations of claim 15, and Koo further teaches: adjusting said common target signal quality level in accordance with a common target service quality level and a common measured service quality

level being determined from said data transmitted on said composite transport channel (*Koo, page 4, paragraph 47, target SIR is adjusted according to target BLER and measured N_e, which is the number of CRC errors per TTI for the reference TrCH*).

45. **For claim 19**. Koo and Andersson disclose all the limitations of claim 15, and Koo further teaches: said individual service quality levels are bit error ratios (Koo, page 1, paragraph 11, individual quality levels are BLER).

46. **For claim 20**. Koo and Andersson disclose all the limitations of claim 15, and Koo further teaches: said common target signal quality level is a common target signal to interference ratio (Koo, page 2, paragraph 20, target signal quality level is SIR).

47. **For claim 21**. Koo and Andersson disclose all the limitations of claim 15, and Koo further teaches: outer loop power control mechanism from which said common target signal quality level is obtainable (Koo, page 2, paragraph 21, outer loop power control process obtains target SIR).

48. **For claim 22**. Koo and Andersson disclose all the limitations of claim 15, and Koo further teaches: wideband code division multiple access--time division duplex (WCDMA-TDD) systems and particularly for time division synchronous code division multiple access (TD-SCDMA) systems (Koo, page 2, paragraph 18, W-CDMA utilizing TDD mode, also applicable to TD SCDMA).

49. **For claim 23**. Koo and Andersson teach: Cellular terminal (***Koo, page 2, paragraph 19***, *WTRU*) capable to operate in a time division duplex cellular system supporting multislot services (Koo, page 1, paragraph 5, TDD system with multiple time slots), comprising at least a transmission power controller for adjusting transmission power control of downlink data transmissions, wherein said transmission power controller is a transmission power controller according to claim 15 (Koo, page 2, paragraph 20, inner loop power control and outer loop power control processes).

50. **For claim 24**. Koo and Andersson teach: Base station (***Koo, page 2, paragraph 19***, *base station*) for time division duplex cellular system supporting multislot services (Koo, page 1, paragraph 5, TDD system with multiple time slots), comprising at least a transmission power controller for adjusting transmission power control of uplink data transmissions, wherein said transmission power controller is a transmission power controller according to claim 15 (Koo, page 2, paragraph 20, inner loop power control and outer loop power control processes).

51. **For claim 25**. Koo and Andersson teach: Radio access network system of a time division duplex cellular system supporting multislot services (Koo, page 1, paragraph 5, TDD system with multiple time slots), wherein said radio access network system comprises at least one base station (Koo, page 2, paragraph 19, base station) and at least on radio network controller (Koo, page 2, paragraph 19, site controller), wherein

said radio access network system comprises additionally a transmission power controller for adjusting transmission power control of uplink data transmissions, wherein said transmission power controller is a transmission power controller according to claim 15 (Koo, page 2, paragraph 20, inner loop power control and outer loop power control processes).

52. **Claims 17, 28** are rejected under 35 U.S.C. 103(a) as being unpatentable over Koo, 2004/0121794 in view of Andersson, US 2005/0085255 as applied to claims 15, 16 above, and further in view of Muller, US 6,490,461.

53. **For claim 17**. Koo and Andersson disclose all the limitations of claim 15, however Koo and Andersson don't teach: mapping a difference between said individual service quality levels and a combined individual service quality level for determining said individual target signal quality offset levels.

Muller from the same or similar fields of endeavor teaches: mapping a difference between said individual service quality levels and a combined individual service quality level for determining said individual target signal quality offset levels (Muller, column 5, lines 5-25, individual BER are measured and compared with estimated total BER to determine an offset, which is used to modify the target E_b/I_o)

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Muller into Koo and Andersson, since Koo suggests a technique for using signal quality offset to control transmission

power, and Muller suggests the beneficial way of calculating such offset by comparing measured individual BER and estimated total BER to provide more accurate power control (Muller, column 4, lines 1-8) in the analogous art of power controlling.

54. **For claim 28**. Koo and Andersson disclose all the limitations of claim 16, however Koo and Andersson don't teach: mapping a difference between said individual service quality levels and a combined individual service quality level for determining said individual target signal quality offset levels.

Muller from the same or similar fields of endeavor teaches: mapping a difference between said individual service quality levels and a combined individual service quality level for determining said individual target signal quality offset levels (Muller, column 5, lines 5-25, individual BER are measured and compared with estimated total BER to determine an offset, which is used to modify the target E_b/I_o)

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Muller into Koo and Andersson, since Koo suggests a technique for using signal quality offset to control transmission power, and Muller suggests the beneficial way of calculating such offset by comparing measured individual BER and estimated total BER to provide more accurate power control (Muller, column 4, lines 1-8) in the analogous art of power controlling.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHOA HUYNH whose telephone number is (571) 270-7185. The examiner can normally be reached on Monday - Friday: 9:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, SEEMA RAO can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin C. Harper/
Primary Examiner, Art Unit 2462

/K. H./
Examiner, Art Unit 2462